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Opinion of the European Committee of the Regions – Ethical Artificial Intelligence and access to supercomputing for start-ups

(C/2024/7066)

Rapporteur: Emil BOC (RO-PPE) Mayor of Cluj-Napoca city

Reference documents: Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions on Boosting start-ups and innovation in trustworthy artificial intelligence

COM(2024) 28 final

Proposal for a Regulation of the Council amending Regulation (EU) 2021/1173 concerning a EuroHPC initiative targeting start-ups to strengthen Europe's leading position in trustworthy artificial intelligence.

COM(2024) 29 final

I. RECOMMENDATIONS FOR AMENDMENTS

COM(2024) 29 final

Amendement 1

Recital (2)

Text proposed by the European Commission	CoR amendment
Since 2021, when Council Regulation (EU) 2021/1173 was adopted, the field of artificial intelligence (AI) has seen enormous technical progress and become a highly strategic and contested domain globally. The Union is at the forefront of efforts to support responsible innovation in trustworthy AI, while setting guardrails and developing effective governance.	Since 2021, when Council Regulation (EU) 2021/1173 was adopted, the field of artificial intelligence (AI) has seen enormous technical progress and become a highly strategic and contested domain globally. The Union is at the forefront of efforts to support responsible innovation in trustworthy AI, while setting guardrails and developing effective ***multilevel*** governance.

Reason

The 2021 regulation amended by this new proposal of 2024 aims in its Article 3 (1) to 'support the twin transition and the development of key skills for European science and industry': this is not possible without cooperation between the EU, national and local and regional levels of governance. Moreover, in its Article 3(2) (b), the regulation of 2021 explicitly aims to 'seek synergies with relevant activities and programmes at Union, national, and regional level, in particular with those supporting the deployment of innovative solutions, education and regional development, where relevant.'

Amendement 2

Recital (5)

Text proposed by the European Commission	CoR amendment
The new objective would allow the Joint Undertaking to perform activities in the domains of acquiring and operating AI-dedicated supercomputers or partitions of supercomputers to enable fast machine learning and training of large AI	The new objective would allow the Joint Undertaking to perform activities in the domains of acquiring and operating AI-dedicated supercomputers or partitions of supercomputers to enable fast machine learning and training of large AI

Text proposed by the European Commission	CoR amendment
foundation models. The Joint Undertaking should also be allowed to create a new access mode to its computing resources for AI startups and the wider scientific community active in AI and to develop dedicated AI applications optimized to run on its supercomputers. Those changes would enable the Joint Undertaking to offer tailored computing power and services to nurture large-scale AI training and development and uptake in the Union, which is not feasible under the current Regulation.	foundation models. The Joint Undertaking should also be allowed to create a new access mode to its computing resources for AI start-ups and the wider scientific community active in AI and to develop dedicated AI applications optimized to run on its supercomputers. Those changes would enable the Joint Undertaking to offer tailored computing power and services to nurture large-scale AI training and development and uptake in the Union, ***the EU Member States and regions,*** which is not feasible under the current Regulation.

Reason

The reasoning in support of this amendment is the same as the reasoning for the CoR amendment to the Recital (2) above. Moreover, the amendment proposed by the CoR to Recital (5) of the 2024 proposal refers to Article 3 (d) of the regulation of 2021 which aims to provide 'computing and data services to a wide range of public and private users in Europe'. In general, a number of regional innovation ecosystems are working in synergy with the Digital Europe's digital innovation hubs and increasingly developing and using artificial intelligence models and applications, and can serve as powerful engines of uptake of new technology developments serving societal needs.

Amendement 3

Article 1 (1) (a) (3c)

Text proposed by the European Commission	CoR amendment
'Artificial Intelligence Factory' means a centralised or distributed entity providing an Artificial Intelligence supercomputing service infrastructure which is composed of an Artificial Intelligence-dedicated supercomputer or Artificial Intelligence partition of supercomputer, an associated data centre, dedicated access and artificial intelligence-oriented supercomputing services and attracting and pooling talent to provide the competences required in using the supercomputers for Artificial Intelligence;';	'Artificial Intelligence Factory' means a centralised or distributed entity providing an Artificial Intelligence supercomputing service infrastructure which is composed of an Artificial Intelligence-dedicated supercomputer or Artificial Intelligence partition of supercomputer, an associated data centre, dedicated access and artificial intelligence-oriented supercomputing services and attracting and pooling talent to provide the competences required in using the supercomputers for Artificial Intelligence***, with an emphasis on involving regional and local expertise and resources***;';

Reason

A place-based approach to AI factories and supercomputers is beneficial to local and regional growth.

Amendement 4

Article 1 (2)

Text proposed by the European Commission	CoR amendment
in Article 3(2), the following point (h) is added:	in Article 3(2), the following point (h) is added:
'(h) to develop and operate the Artificial Intelligence Factories in support of the further development of a highly competitive ***and*** innovative Artificial Intelligence ecosystem in the Union';	'(h) to develop and operate***, in collaboration with regional and local stakeholders,*** the Artificial Intelligence Factories in support of the further development of a highly

Text proposed by the European Commission	CoR amendment
	competitive***,*** innovative***, accessible and interoperable*** Artificial Intelligence ecosystem in the Union***, the EU Member States and regions***';

Reason

Interoperability and accessibility of AI ecosystems are key concerns for local and regional stakeholders. Ensuring these common standards would not only make data flow easier, but also boost innovation and economic growth at local and regional level.

Amendement 5

Article 1 (3) (viii)

Text proposed by the European Commission	CoR amendment
interacting with the other Artificial Intelligence Factories, making their services accessible across Europe and cooperating with the EuroHPC Competence Centres and Centres of Excellence, and with relevant Artificial Intelligence initiatives of the Union, such as the hubs of Artificial Intelligence start-ups, the Artificial Intelligence and data ecosystems, the Artificial Intelligence Testing and Experimentation Facilities, the European central Artificial Intelligence platform, the Artificial Intelligence-oriented Digital Innovation Hubs, the Artificial Intelligence related European Institute of Innovation and Technology Knowledge and Innovation Communities, relevant European research infrastructures and other related initiatives.	interacting with the other Artificial Intelligence Factories, making their services accessible across Europe and cooperating with the EuroHPC Competence Centres and Centres of Excellence, and with relevant Artificial Intelligence initiatives of the Union, such as the hubs of Artificial Intelligence start-ups, the Artificial Intelligence and data ecosystems, the Artificial Intelligence Testing and Experimentation Facilities, the European central Artificial Intelligence platform, the Artificial Intelligence-oriented Digital Innovation Hubs, the Artificial Intelligence related European Institute of Innovation and Technology Knowledge and Innovation Communities, relevant European research infrastructures and other related initiatives ***at the level of European cooperation, the EU Member States and regions***.

Reason

The same as for amendments 2 and 3 above.

Amendement 6

Article 1 (4)

Text proposed by the European Commission	CoR amendment
in Article 9(5), the following point (g) is added:	in Article 9(5), the following point (g) is added:
(g) for the Artificial Intelligence-dedicated supercomputers the following additional selection criteria shall apply for the hosting entities:	(g) for the Artificial Intelligence-dedicated supercomputers the following additional selection criteria shall apply for the hosting entities:
(i) proximity with an established datacentre;	(i) proximity with an established datacentre;
(ii) vision, plans and capability of the hosting entity to address the challenges of the Artificial Intelligence startup and research and innovation ecosystem and the Artificial Intelligence user community and providing a supportive centralised or distributed Artificial Intelligence-oriented supercomputing service;	(ii) vision, plans and capability of the hosting entity to address the challenges of the Artificial Intelligence start-up and research and innovation ecosystem and the Artificial Intelligence user community and providing a supportive ***and accessible*** centralised or distributed Artificial Intelligence-oriented supercomputing service;

Text proposed by the European Commission	CoR amendment
(iii) quality and pertinence of experience and know-how available at the intended team that would be in charge for the supportive Artificial Intelligence-oriented supercomputing service environment;	(iii) quality and pertinence of experience and know-how available at the intended team that would be in charge for the supportive Artificial Intelligence-oriented supercomputing service environment;
(iv) plans for interaction and cooperation with other Artificial Intelligence Factories, with EuroHPC Competence Centres and EuroHPC Centres of Excellence and with relevant Artificial Intelligence activities such as the hubs of Artificial Intelligence startups, the Artificial Intelligence and data ecosystems, the Artificial Intelligence Testing and Experimentation Facilities, the European central Artificial Intelligence platform, the Artificial Intelligence-oriented Digital Innovation Hubs and other related initiatives;	(iv) plans for interaction and cooperation with other Artificial Intelligence Factories, with EuroHPC Competence Centres and EuroHPC Centres of Excellence and with relevant Artificial Intelligence activities such as the hubs of Artificial Intelligence start-ups, the Artificial Intelligence and data ecosystems, the Artificial Intelligence Testing and Experimentation Facilities, the European central Artificial Intelligence platform, the Artificial Intelligence-oriented Digital Innovation Hubs and other related initiatives ***at local and regional level***;
(v) existing capabilities and future plans of the hosting entity to contribute to the development of the talent ***pool***';	(v) existing capabilities and future plans of the hosting entity to contribute to the development of the talent ***pool, focusing on fostering skills development, training opportunities and educational initiatives tailored to the needs of the local community;***';

Reason

Accessibility of supercomputing services is of essence. Moreover, the creation of a talent pool presupposes a particular focus on the development of human capital.

Amendement 7

Article 1 (9) (b)

Text proposed by the European Commission	CoR amendment
the following paragraph 2b is inserted:	the following paragraph 2b is inserted:
'2b. The Governing Board shall define special access conditions for the Artificial Intelligence-dedicated supercomputers and the EuroHPC supercomputers upgraded for Artificial Intelligence capabilities in accordance with Article 17 taking into account the specific needs of the Artificial Intelligence startup and research ecosystem. This shall include dedicated access to startups. Only proposals for developing trustworthy and ethical Artificial Intelligence models, systems and applications that are in line with EU values shall be eligible for access.'	'2b. The Governing Board shall define special access conditions for the Artificial Intelligence-dedicated supercomputers and the EuroHPC supercomputers upgraded for Artificial Intelligence capabilities in accordance with Article 17 taking into account the specific needs of the Artificial Intelligence start-up and research ecosystem. This shall include dedicated access to start-ups. Only proposals for developing trustworthy and ethical Artificial Intelligence models, systems and applications that are in line with EU values shall be eligible for access. ***The access criteria shall be set in a transparent way with full public information from the early stages.***'

Reason

Self-explanatory.

Amendement 8

Article 1 (9) (b)

Text proposed by the European Commission	CoR amendment
	(b) the following paragraph 2c is inserted:
	'2c. Access conditions to start-ups and small and medium size enterprises striving to develop foundational models of ethical artificial intelligence by applying for the use of the EU HPC capacity should be set in a way minimising administrative burden and applying flexibly the new EU Artificial Intelligence Act, commensurately with the situation of start-ups and small and medium-sized enterprises.'

Reason

The issue of administrative burden in the context of AI regulation regarding small and medium size enterprises and start ups has been raised in the previous CoR Opinion on Artificial Intelligence, cf point 24 in the Official Journal of the European Union C 97/85 of 28.2.2022. The criteria for ethics and responsibility, while they will be based on compliance with the AI Act, should be carefully detailed for the purposes of access to the EU HPC in a way which remains reasonably feasible for start ups and small and medium size enterprises, as being different from the large incumbent tech companies with their considerable capacities of regulatory compliance departments.

II. **POLICY RECOMMENDATIONS**

THE EUROPEAN COMMITTEE OF THE REGIONS (CoR),

1. acknowledges the important regulatory steps undertaken in the last year in order to assure the innovative, ethical, and sustainable use of AI tools in Europe; underlines the fact that the EU is the first major actor that issued a comprehensive legal framework in this field and, as such, the rules proposed have a high chance of being adopted or to influence subsequent regulations;

2. notes that the EU is lagging in certain areas (for example foundational models or cutting-edge semiconductors); stresses that the EU should take steps to address some of the structural challenges to innovation, (competitiveness, fragmentation and inadequate integration of the digital market, a lack of strategic focus, underinvestment in R&D, less attention to business models and market fit, and shallower venture capital markets); advises creating support mechanisms that can aid Member States and regional actors in transitioning from thought leaders to market leaders;

3. reiterates that 'the Commission's goal of making the EU a global leader in the responsible and human-centred development of AI can only be achieved if local and regional authorities have a significant role. Local and regional authorities are best placed to help create an environment propitious to boosting investment in AI in the coming years and fostering trust in AI' ([1]). Regrets to this effect the fact that the proposal for a regulation does not acknowledge the role of local and regional authorities in supporting AI start-ups;

4. recalls that the CoR represents the local and regional level of government, which is closest to the citizen, and therefore is particularly concerned with the respect due to the people's individual and collective rights in the process of the use and development of digital technologies; affirms that the competitiveness and technology sovereignty of the EU requires practical follow up on the recognition of multi-level governance and the role of regional research and innovation ecosystems; suggests to expand the Board of the Euro HPC in the future with a representative of the European Committee of the Regions, in the capacity of an observer, appointing a political representative and his/her administrative support;

([1]) Opinion of the European Committee of the Regions — European approach to artificial intelligence – Artificial Intelligence Act (revised opinion) (OJ C 97, 28.2.2022, p. 60).

5. notes the importance of universities consortiums in advancing an AI research agenda; underlines the importance of collaboration between different stakeholders – established companies, start-ups, universities, public entities, and NGOs – in creating innovation ecosystems with a significant place-based component that can better address the challenges and make use of the opportunities brought about by AI;

6. notes that one of the main challenges related to new technologies, including AI, is interoperability. Recalls to this effect the economic and technical barriers obstructing the share and use of data across different platforms and for different purposes. Suggests therefore building on the potential of truly interoperable supercomputing, which would address the concerns of local and regional stakeholders while boosting place-based growth;

7. stresses the challenge to enable meaningful engagement and consultations with local regional communities and all stakeholders affected by the deployment of AI, to address their concerns and feedback. This engagement process involves actively seeking input, addressing concerns, and incorporating feedback from diverse groups;

8. emphasises the need for easier and clearer rules for access to the existing supercomputing infrastructure and the development of new supercomputers; stresses the need for preparing both the existing supercomputers and the future one for use in training new AI foundational models, built with the ethical, security and data governance requirements detailed in the AI Act;

9. stresses that access to data and especially good quality data is essential for training AI models and testing AI applications; opines that data standardization efforts based on a European taxonomy would be beneficial; considers that AI could be used as a neutral orchestrator in data spaces and that service providers should strive to offer such AI systems in a neutral and trustworthy way;

10. asserts that humans must remain in control of AI systems, ensuring these systems respect human autonomy, dignity, and decision-making authority; stresses that AI development and deployment should enhance human welfare, support societal goals, and contribute to environmental sustainability;

11. considers that adapting, expanding and supplementing existing programs such as Regional Innovation Valleys or Digital Innovation Hubs could help European start-ups and established companies to be competitive in a global market; insists that funding procedures for AI start-ups should: (1) be offered as quickly as possible to help companies be more agile; (2) encourage initial phase investment; (3) support them after launch, and (4) take into account that a high percentage of funded start-ups could fail (a *fail to succeed* mindset);

12. suggests studying if an organization similar to the one it already has for nuclear energy, publicly funded and responsible to the public, can make the benefits of AI research accessible broadly across industry and society; recognizes, at the same time, the peril of overregulation and of too many European regulatory agencies increasing bureaucratic burdens;

13. emphasises that AI development in Europe should balance transparency, accountability, and equity with the need to move fast in a quickly changing technological environment; stresses that ethical concerns in AI training such as intellectual property, bias, (including gender, racial, and other forms of discrimination), and diversity, and in implementation such as security and privacy, digital divide and behavioural impact, should be taken into consideration; insists that AI systems should be designed and audited to prevent and mitigate biases, ensuring fair and equitable outcomes for all individuals and communities;

14. suggests including and documenting privacy and data security measures that are designed to protect sensitive information used in the development and training of AI. The inclusion and documentation of robust privacy and data security measures, including encryption, access controls, and regular audits, protect sensitive data from cyber threats. Documenting these measures ensures that there is a clear, actionable plan to safeguard data integrity and confidentiality;

15. considers that new policies that assist in creating a skilled workforce capable of both advancing and working with AI and supercomputing technologies are needed; notes that EU institutions can help harmonise Member States' AI talent strategies to address the current and future needs of start-ups in the AI and supercomputing sectors; notes also the importance of protecting workers' rights and privacy by ensuring that AI-based surveillance tools are not used to monitor employees;

16. encourages the development of interregional AI projects that can connect cross-border expertise and resources, supported by EU funding mechanisms like the European Regional Development Fund; support the establishment of regional talent hubs that focus on advanced training in AI, working closely with local universities and vocational training centres, to retain local talent, support regional innovation systems, and attract international experts;

17. advises the creation of regional sandboxes that allow for localized testing of AI technologies, which can provide data and insights for broader EU policy adjustments; supports building a network of such regional sandboxes that share experiences and best practices, ensuring gradual cohesion and innovation compatibility across regions;

18. considers that start-ups and SMEs in data intensive domains such as AI can be assisted by dedicated teams, maybe part of the AI Factories, that can help regional stakeholders develop their ideas from concept to testing using supercomputing resources; suggests establishing dedicated teams within supercomputing centres that specialize in AI applications;

19. suggests starting pilot projects that utilize supercomputing for public sector challenges, such as traffic management, public health surveillance, and environmental monitoring; supports the development of smart city initiatives that make use of European supercomputing assets for big data analytics, enhancing urban planning and public service delivery;

20. considers that an annual AI challenge focused on solving regional issues such as healthcare, agriculture, or transportation, with substantial prizes and funding for scaling successful solutions can help foster a competitive spirit in participating regions; believes that partnerships with local universities to host these competitions can strengthen these necessary stakeholder connection;

21. notes that, if the legal framework allows, introducing tax incentives for AI SMEs, including deductions for R&D expenditures and for investors in AI technologies, streamlining the process of start-up registration, and reducing the bureaucratic burden can create a more favourable environment for AI development and implementation;

22. supports the creation of AI clusters that focus on specific industries where Europe has competitive advantages, such as automotive, financial services, or healthcare; encourages the development of formal and informal connections between different clusters across the EU to facilitate knowledge exchange and innovation in this field;

23. believes that research grants specifically aimed at developing green AI technologies, such as reducing energy consumption of AI systems, optimizing algorithms for renewable energy sources, and using AI to monitor and manage environmental impacts would help with the European sustainability goals;

24. highlights the crucial role of incentivising the patenting of European AI technologies to foster innovation and maintain global competitiveness; emphasises that support for improved intellectual property frameworks and patenting can significantly boost the development of cutting-edge European AI solutions; underlines that building a favourable environment for patenting can encourage more research and investment in the field of AI;

25. regrets to find that, contrary to the recurrent pledges of the European Commission, the expected level of investment, growth and jobs related to AI has not been mobilised neither from public funds, nor from private sources, and notes the recent deliberations in the Council among the EU Member States to reduce future funding for research and innovation;

26. suggests the introduction of targeted initiatives and funding mechanisms to support researchers and companies in securing patents for European AI innovations, thereby solidifying Europe's position as a leader in the AI sector;

27. notes that the proposal complies with the principles of subsidiarity and proportionality as set out in Article 5 of the Treaty on European Union because, by making its supercomputing capacity available to innovative European start-ups, the EU jointly with its Member States can enhance its technological sovereignty and global competitiveness.

Brussels, 9 October 2024.

The President
of the European Committee of the Regions
Vasco ALVES CORDEIRO